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REMARKS/ARGUMENTS

The ATTACHMENT TO THE ADVISORY ACTION states:

"Amendment is non-compliant since a clean copy of the claim is missing. Also, an abstract on a separate sheet is needed.

Again the insertion of continuing data in the beginning of the specification is needed."

In response to the above statement, enclosed are:

(1) the abstract on a separate sheet

(2) a clean copy of Page 1 containing the continuing data

(3) a clean copy of Page 2. The sentence regarding the TEM measurement previously inserted after line 23 by Applicants' amendment, has been deleted in accordance with MPEP 706.03(O) ¶fp7.28.

(4) a complete listing of claims.

35 U.S.C. 112, first paragraph

Claims 3, 4, 7, 8 and 14 stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The above rejection is rendered moot by the cancellation of Claims 3, 4, 7 and 8 and by the amendment of Claim 14. Claim 14 no longer depends from Claim 4 or Claim 8. It now depends from Claim 9 which does not recite the limitation relating to TEM.

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35 U.S.C. 103(a)

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/04117 or Christianni et al (US 5,747,560) in view of Suss et al. (US 4,558,075). This rejection is respectfully traversed for the following reasons.

Claim 1 is reproduced as follows:

1. A process for producing a nanocomposite polymer by dispersing a multi-layered silicate material into a thermoplastic polymer, comprising the step of mixing a quaternary ammonium intercalated multi-layered silicate material with the thermoplastic polymer at a temperature greater than the melting or softening point of the thermoplastic polymer, characterized by the quaternary ammonium intercalated multi-layered silicate material having been reacted with a polyvalent anionic organic material so that the edges of the multi-layered silicate material are bound to the polyvalent anionic organic material to form a polyvalent anionic organic edge coated quaternary ammonium intercalated multi-layered silicate material.

Christianni et al (US 5,747,560) do not teach or suggest a quaternary ammonium intercalated multi-layered silicate material having been reacted with a polyvalent anionic organic material so that the edges of the multi-layered silicate material are bound to the polyvalent anionic organic material to form a polyvalent anionic organic edge coated quaternary ammonium intercalated multi-layered silicate material, as required in Claims 1-15.

Suss et al. (US 4,558,075) disclose a solvent-based organic high solids coating composition containing (A) a film-forming binder system containing a cross-linkable resin and (B) an organo-modified clay dispersed in the coating composition; (C) a solvent and (D) organic polymeric particles.

The organo-modified clay is formed from the reaction of an organic cation, organic anion and smectite-type clay (col. 7, lines 33-36; col. 8, lines 10-11). The organic anion is capable of reacting with the organic cation and form intercalations with a smectite-type clay as **an organic cation-organic anion complex** (col. 9, lines 53-55).

Suss does not teach polyvalent anionic organic material. Suss does not teach reacting a multilayered silicate material with an organic cation, such as a

quaternary ammonium salt, to form a quaternary ammonium intercalated multi-layered silicate material and then reacting the quaternary ammonium intercalated multi-layered silicate material with a polyvalent anionic organic material so that the edges of the multi-layered silicate material are bound to the polyvalent anionic organic material to form a polyvalent anionic organic edge coated quaternary ammonium intercalated multi-layered silicate material. Instead, Suss teaches reacting an organic anion with an organic cation and forming intercalations with a smectite-type clay as **an organic cation-organic anion complex** (col. 9, lines 53-55). Combining the teachings of Christiani et al and Suss et al. would not produce a polyvalent anionic organic edge-coated quaternary ammonium intercalated multi-layered silicate material, as required in Claims 1-15. The edges of the multilayered material would not be bound to a polyvalent anionic organic material as required in Claims 1-15 because neither Suss nor Christianni teaches a polyvalent anionic organic material, and since Suss teaches an organic cation-organic anion **complex**, the edges of the multilayered material would not be bound to a polyvalent anionic organic material, as required in the claims.

In view of the above remarks, Applicants submit that Claims 1-15 are patentable under 35 U.S.C. 103(a) over WO 93/04117 or Christianni et al (US 5,747,560) in view of Suss et al. (US 4,558,075).

Claims 16-19 are rejected under 35 USC 103(a) as being unpatentable over Kawasumi et al. (US 4,810,734) or Polansky et al. (US 6,287,992) in view of Suss et al. (US 4,558,075. This rejection is respectfully traversed for the following reasons.

Neither Kawasumi nor Polansky teaches or suggests a quaternary ammonium intercalated multi-layered silicate material having been reacted with a polyvalent anionic organic material so that the edges of the multi-layered silicate material are bound to the polyvalent anionic organic material to form a polyvalent anionic organic edge coated quaternary ammonium intercalated multi-layered silicate material, as required in Claims 16-19.

Suss et al. have been discussed above.

In view of the above remarks, Applicants submit that Claims 16-19 are patentable over Kawasumi et al. (US 4,810,734) or Polansky et al. (US 6,287,992) in view of Suss et al. (US 4,558,075).

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Conclusion

In view of the above amendments and remarks, the claims are now in condition for allowance and a Notice of Allowance of Claims 1, 2, 5, 6, and 9 to 19 is respectfully requested.

Respectfully submitted,

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